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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/543,125

04/05/2000

Brett T. Hannigan

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11/18/2003

DIGIMARC CORPORATION
19801 SW 72ND AVENUE
SUITE 100
TUALATIN, OR 97062

EXAMINER

HESS, DANIEL A

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/543,125

Applicant(s)

HANNIGAN, BRETT T.

Examiner

Daniel A Hess

Art Unit

2876

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-10 and 13-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-9 is/are allowed.
- 6) ☒ Claim(s) 10 and 13-21 and 23 is/are rejected.
- 7) ☐ Claim(s) 22 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Remarks

In view of the appeal brief filed on 9/15/2003, PROSECUTION IS HEREBY REOPENED. The reasons for reopening of prosecution are set forth below; some claims have new rejections provided; other subject matter is indicated as allowable based on the applicant's arguments.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

The examiner appreciates the applicant's patience in light of prosecution that is taking longer than usual. The examiner also appreciates the chance to dialog with Mr. Steven Stewart on 11/13/2003 and 11/14/2003.

Changes made in the examiner's stance in this action include the following:

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Changes made in the examiner's stance in this action include the following:

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- The rejection of claim 3 is withdrawn, as the applicant's arguments are convincing. Indeed the examiner could not find motivation in the prior art of record for using motion sensors for another purpose, particularly since a separate data-gathering sensor is already present.
- A reference not previously cited, Kurowski (US 6,533,127), is employed in the rejection of claims 13, 16 and 19 because it teaches more a watermark detection process that employs two separate techniques. The first technique involves a sampling of data blocks, using frequency information, while a second technique involves a more thorough pass through those portions revealed to have a greater chance of having watermark data. This reference replaces Cherry (US 6,142,376) in some instances; the examiner agrees with some of the applicant's arguments regarding Cherry.
- Some arguments are reworded with respect to claims 10, 13, 16, 19 and 21 for the sake of clarity.
- Claims 17 and 18 (previously indicated as allowable) are rejected, based on teachings found in Kurowski.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art admitted by the applicant.

Firstly, the Jepson portion of the claim, which is impliedly admitted to be old in the art, is, as the applicant has admitted, an existing, off-the-shelf scanner (admitted to be old in instant specification, column 2, lines 9 to 12). The applicant further cites in the background examples (such as US 5,862,260) of steganographic encoding of watermarks in the instant specification (page 1, lines 12-14). Further evidence might be seen in such prior art as Boncelet Jr. et al. (US 6557103). These watermarks imply a need for watermark decoders.

The applicant fails to teach that the admitted off the shelf scanner is used to decode watermarks.

It is understood, however that using off-the-shelf components can often result cost savings.

In view of this, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the old and well-known off-the-shelf scanner in the application of watermark decoding because this can save money as compared to developing a new scanner.

Claims 13-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurowski (US 6,553,127) in view of the prior art admitted by the applicant.

Re claim 13: Kurowski teaches all of the elements which follow the preamble. There is (column 3, lines 13-20) a two-technique process. The first technique can involve testing blocks on some criterion to see if they pass a preselection process. The second technique involves processing those candidates. Processing can be (column 3, lines 40-45) detecting the watermark (i.e. attempt to read / decode).

Kurowski fails to show which piece of scanning hardware is employed in the above scanning process.

The scanner cited in the Jepson portion, which is admitted prior art is simply an ordinary and typical barcode scanner. All of the elements prior to 'the improvement comprising' are necessary elements of *any* fully functional optical code scanner of the sensor array type.

In view of the applicant's admission, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known off-the-shelf scanner in to perform Kurowski's process because using a typical, off-the-shelf scanner is often cheaper than developing the same hardware in-house.

Re claim 14: A 'calibration' signal could be anything used to mark an area where a watermark might be, including the 'selected characteristics' referred to throughout Kurowski, column 3.

Re claim 15: The criteria indicating improved odds of a watermark can include frequency information (column 11, lines 55-65).

Re claim 16: See discussion re claim 13 above. The 'attribute information' referred to in this claim is another word for 'selected characteristics' referred to throughout column 3.

Re claim 17: The criteria indicating improved odds of a watermark can include frequency information (column 11, lines 55-65).

Re claim 18: The criteria indicating improved odds of a watermark can include texture information (column 11, lines 55-65).

Re claim 19: See discussion re claim 13 above.

Re claim 20: Kurowski specifically aims to avoid 'brute force' processing of prior art systems. Thus, one can infer that higher rates of sampling are intended only for those blocks that are selected as described above and throughout Kurowski.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh et al. (US 5,206,491).

The portion of the claim recited in the preamble describes components common generally to scanners. As Katoh shows (figures 2a and 2b) there are two spaced apart sensors employing different views to improving reading (decoding) of the data.

Katoh fails to show that the sensors are multi-element.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the old and well-known multielement sensing system for a single sensor in Katoh to handle cases of 2D codes to be read.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh as modified by the known art of multi-element sensing systems as applied to claim 21 above, in view of the applicant's prior art admissions.

Katoh fails to teach watermark detecting.

The applicant admits watermark systems in need of decoding.

In view of the need shown by the applicant, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a two-view scanner to decode watermarks, because, as with any optically readable code, two views increase the odds that the code will be in range of at least one scanner.

Allowable Subject Matter

Claims 3-9 are allowed. The examiner could not find motivation in the prior art of record for using motion sensors for another purpose, particularly since a separate data-gathering sensor is already present.

Claims 22 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In Katoh, which was applied in claim 21 above, the different views are not employed for the purpose of generating compensation values.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rhoads et al. (US 6,516,079) teaches (column 4, lines 25-37 and column 5, lines 1-15) using two techniques in concert to perform watermark decoding. Moskowitz (US 6,205,249)

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further teaches (column 3, 35-50) identifying candidates and then performing another technique on the candidates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel A Hess whose telephone number is (703) 305-3841. The examiner can normally be reached on 8:00 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G Lee can be reached on (703) 305-3503. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



DH

Daniel A Hess
Examiner
Art Unit 2876



KARL D. FRECH
PRIMARY EXAMINER